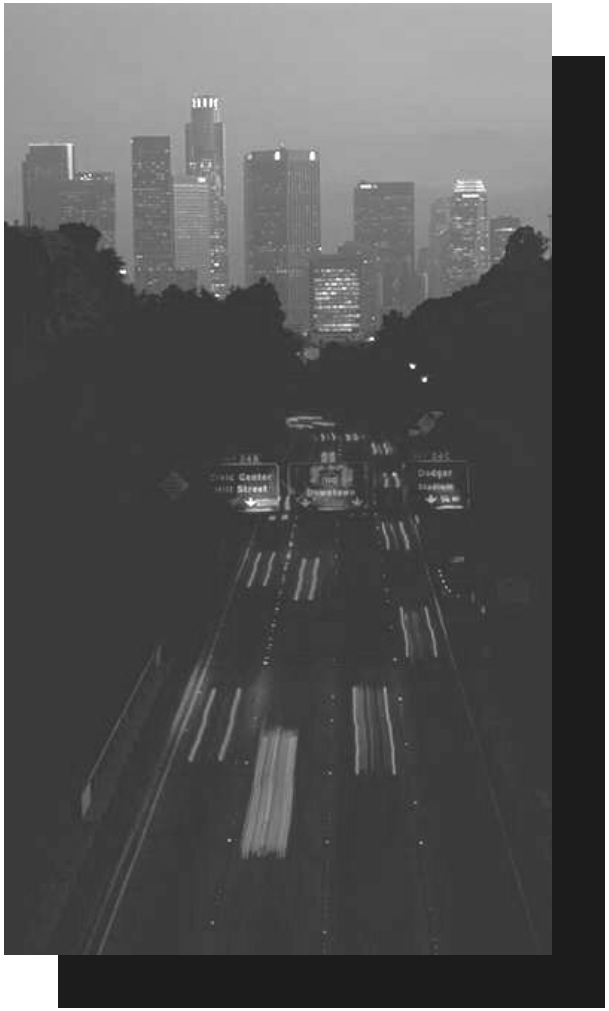
Fuels Workshop on Regulatory and Non-Regulatory Fuels Activities for 2010

September 8, 2010

California Environmental Protection Agency

Air Resources Board

Agenda



- Introductions and Schedule
- CaRFG3 Amendments
- E10 Certification Fuel
- E85 Specification
- Closing Remarks

Schedule

- CaRFG3 and E85 Proposed Amendments to go to the board in March 2011
- Updated E10 certification fuel to go to the board with LEVIII rulemaking in January 2011

Proposed Predictive Model Coefficient Corrections

Coefficient Description	Current Coefficient	Amended Coefficient
Tech 3 NOx Emissions for RVP contribution	0.424915	0.0424915
Tech 3 PWT Benzene Emissions for benzene contribution	-0.12025037	0.12025037
Tech 4 PWT Benzene Emissions for coefficient for RVP contribution	0.07392876	-0.04782469
Tech 4 RVP standard deviation	0.8891114	0.889114
Tech 5 PWT Benzene Emissions for coefficient for RVP contribution	0.06514198	-0.04214049
Tech 5 PWT Formaldehyde Emissions for coefficient for T90 contribution	0.000000	0.06037698
Tech 5 benzene mean	1.014259	0.969248
Tech 5 benzene standard deviation	0.537393	0.504325
Tech 5 PWT Acetaldehyde Emissions for coefficient for “oxygen as ethanol”	0.046699012	0.46699012

Proposed Amendments

- Delete outdated provisions
- Amend notification requirements regarding sales and supplies of a final blend
- Amend restrictions on blending CARBOB with other liquids
- Require that CaRFG with 7.2 psi or less certify as a RVP controlled fuel
- Amend the definition of “Racing Vehicle”

Impact of Proposed Amendments

- Economic Impacts
  - Change in coefficients minimal, should not impact formulations
  - 7.2 psi RVP controlled amendment removes some unused flexibility but should not impact formulations.
  - No significant economic impacts expected
- Environmental Impacts
  - Incorrect coefficients slightly stricter
  - Correct coefficients comply with Health and Safety Code section 43013.1(b)(1) which requires that CaRFG3 preserve the emission benefits of CaRFG2

WSPA Suggested Additional Amendments

- Lower sulfur cap of denatured ethanol to 5 ppm
  - No proposed changes for this round of amendments
  - Will reconsider should ethanol levels increase in gasoline
- Delete other outdated provisions in the regulation
  - Will remove as many outdated provisions as possible that do not have enforcement impacts

WSPA Suggested Additional Amendments

- Incorporate group protocols into the regulation
  - The following protocols are being added to the regulation
    - Downstream Tanks Located on the Production Facility Premises
    - Using a Marine Vessel as an Import Facility
    - Using a Cargo Tank Truck or a Rail Car as an Import Facility
    - Retain Samples when using a Site-Specific Test Method
    - Multiple Predictive Model Formulations

Implementation of Proposed Amendments

- Staff is proposing that the 2010 proposed amendments would take effect upon the Office of Administrative Law's filing with the Secretary of State.

Open Discussion and Questions

E10 Certification Fuel

- Proposed with the LEVIII rulemaking in January 2011
- E10 cert fuel based on in-use data accumulated by enforcement division
  - Used Predictive Model submissions by producers
- Dataset made up of approximately 600 different formulations
- Goal was to make certification fuel representative of current in-use E10 fuel

E10 Certification Fuel

PROPERTY	Current MTBE Cert Fuel Spec	Initial Draft E10 Spec	New Proposed E10 Cert Fuel Based on Actual Data*
RVP (psi)	6.7 - 7.0	6.95	6.9 - 7.2
T50 (deg. F.)	200 - 210	214	205 - 215
T90 (deg. F.)	290 - 300	312	310 -320
AROM (vol%)	22 - 25	24	20 -22
OLEF (vol%)	4.0 - 6.0	7.4	6.0 - 8.0
MTBE (vol%)	10.8 - 11.2	-	-
EtOH (vol%)	-	10.0	9.8-10.0
SULFUR (ppmw)	30 - 40	8	8.0 - 11
BENZENE (vol%)	0.8 - 1.0	0.74	0.6 - 0.8
R+M/2	91	-	91
Sensitivity (min)	7.5	-	7.5

***Incomplete spec. Full spec can be found in meeting notice and at http://www.arb.ca.gov/fuels/gasoline/meeting/2010/090810workshopnotice.pdf**

E10 Certification Fuel Dataset

	RVP	ARO	BEN	OLE	SUL	T50	T90
Average	7.14	21.11	0.79	6.91	9.01	212.10	315.40
Std Dev	0.62	3.50	0.12	2.22	2.90	13.26	20.33
Range	6.5-7.2	11.2-31.8	0.48-1.1	1-10	2-19	193-220	284-330
Total # of Samples	586						

Suggested Adjustment to Certification Fuel

- Add T10 specification and set range at 130-150 degrees F
- Increase total aromatics range from a 2% range to a 3% range
- Add multi-alkyl specification of 10% max
- Add Total Oxygen specification

Implementation of E10 Certification Fuel

- Staff is proposing that the E10 certification fuel to be required beginning 2014
- E10 Certification fuel would be optional for use upon the Office of Administrative Law's filing of the LEVIII rulemaking with the Secretary of State

Open Discussion and Questions